

Name:

Solutions

Evaluate each logarithmic expression:

1. $\log_7 343 = 3$	2. $\log_{12} 144 = 2$	3. $\log_4 64 = 3$
4. $\log_{100} 1 = 0$	5. $\log_{16} 0 = \text{undefined}$	6. $\log_5 \frac{1}{5} = -1$
7. $\log_{\frac{2}{5}} \frac{5}{2} = -1$	8. $\log_{20} 400 = 2$	9. $\log_2 128 = 7$
10. $\log 0.01 = -2$	11. $\log 10,000 = 4$	12. $\log_3 243 = 5$
13. $\log_9 729 = 3$	14. $\log_{36} 6 = \frac{1}{2}$	15. $\log_{27} 3 = \frac{1}{3}$
16. $\log_4 8 = \frac{3}{2}$	17. $\log_{16} 32 = \frac{5}{4}$	18. $\log_{27} 9 = \frac{2}{3}$
19. $\log_2 (-4) = \text{undefined}$	20. $\log_{0.2} 25 = -2$	21. $\log_{0.1} 100 = -2$
22. $\log_2 0.25 = -2$	23. $\log_2 0.125 = -3$	24. $\log_{64} 32 = \frac{5}{6}$